The SIXTEENTH NATIONAL IRRIGATION CONGRESS and THE INTER-STATE INDUSTRIAL EXPOSITION

ALBUQUERQUE
NEW MEXICO
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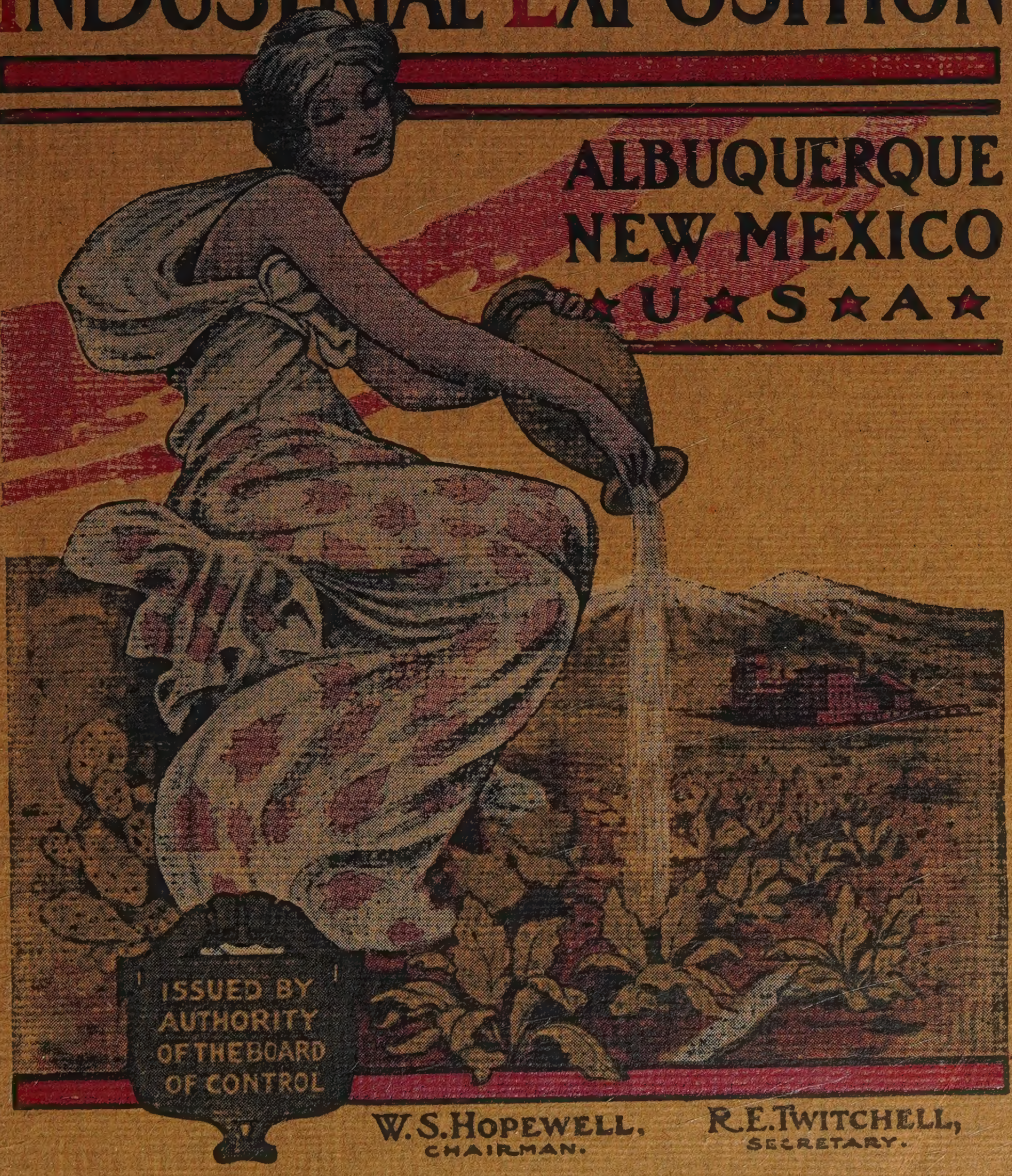

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CONVENTION HALL, ALBUQUERQUE, NEW MEXICO.
COST $25,000. CAPACITY 3500.

SIXTEENTH

NATIONAL IRRIGATION CONGRESS

AND

THE INTER-STATE INDUSTRIAL EXPOSITION

TOGETHER WITH

SOME FACTS AND FIGURES RELATIVE TO NEW MEXICO

AND

PROJECTS FROM THE RECLAMATION OF ITS ARID LANDS.

PUBLISHED BY AUTHORITY OF BOARD OF CONTROL OF
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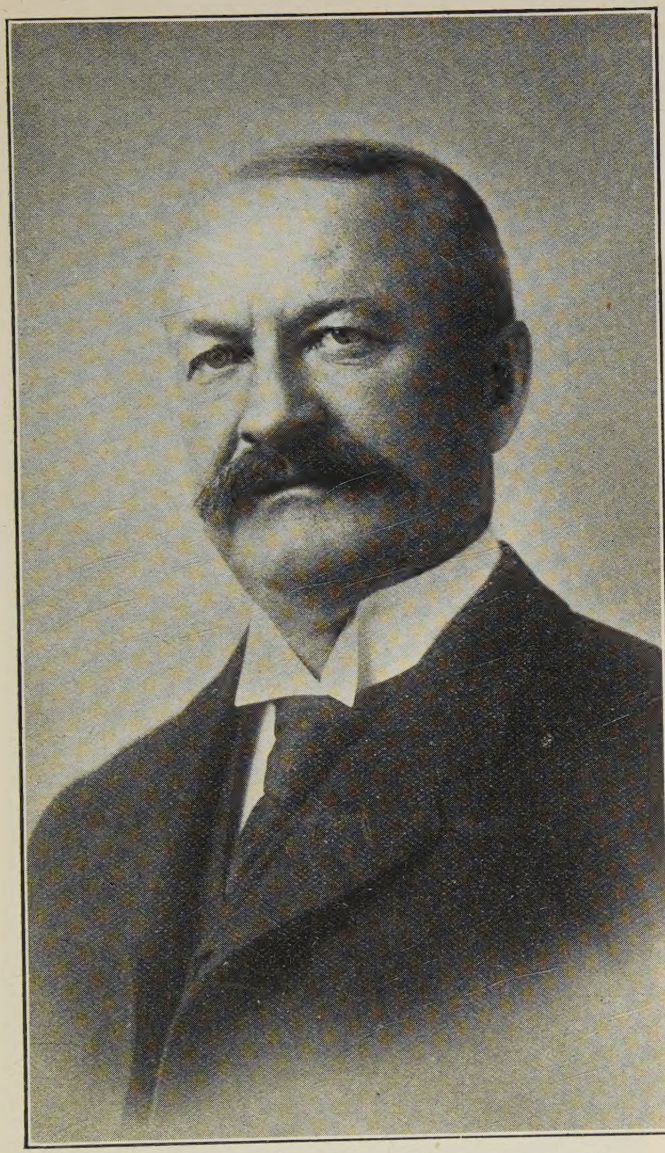

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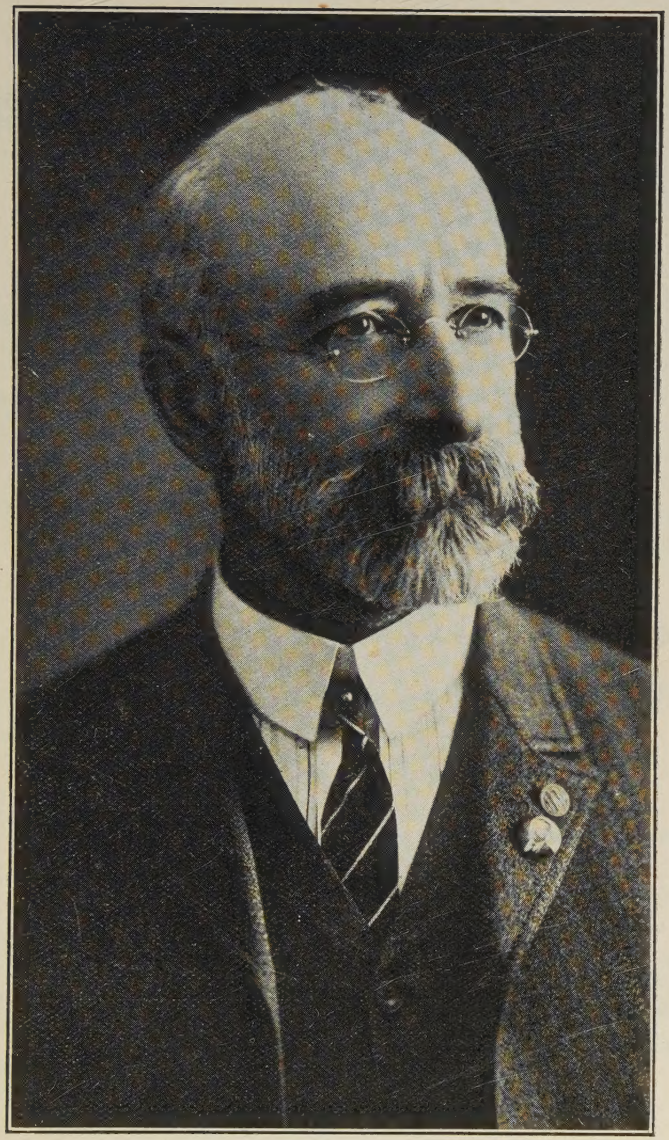

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THE NATIONAL IRRIGATION CONGRESS

The National Irrigation Congress will hold its sixteenth session at Albuquerque, New Mexico, September 29th, 30th and October 1st, 2nd and 3rd, 1908. This great assembly is one of the most important unofficial organizations in the United States. Its purpose is to promote the wise development of governmental policies relating to the conservation, development and best use of the forests, streams and lands of the country.

It seeks to save the forests, store the floods, reclaim the deserts and make homes on the land.

Its annual sessions have had an important influence on national legislation and national prosperity.

THOSE WHO PARTICIPATE.

The congress is composed of delegates representing the states and territories of the Union, counties, municipalities, organized bodies of many kinds.

Its personnel includes the highest officials of the national government, senators, representatives and administrative officials.

Prominent men from every portion of the United States attend and participate in the proceedings. Among these are governors of states and men who stand at the head of the great manufacturing, commercial and financial interests of the country, leading professional men, educators, engineers and scientists.

WHAT HAS BEEN DONE.

The national reclamation act, through which there has been accumulated in the national treasury a revolving fund of approximately forty million dollars, now being expended in the construction of great irrigation systems that will reclaim millions of acres

Exposition Buildings, Albuquerque.

of semi-arid lands, is a direct result of a public sentiment developed by the annual sessions of this congress.

The new national policy of forest preservation, under which more than a hundred millions of forest area and grazing lands of the public domain have been reserved from sale for the purpose of preventing denudation and destruction, insuring their proper use and conserving the timber and range resources of the country and the protection of watersheds, is largely due to the discussions which have annually been had at the National Irrigation Congress.

ITS SEMI-OFFICIAL SIDE.

The participation of high officials of the general government who are charged with the administration of the National Irrigation and Forestry laws gives to this congress a semi-official character. It is the one place where these officials meet the people and discuss with them the details of the great work which the government has undertaken.

In its membership, the National Irrigation Congress is the most broadly representative of any of our national gatherings. It deals with questions of national policy and representation is accorded to practically every body of citizens in the United States.

The program of the Congress will consist of addresses by men eminent in this and other countries, carefully prepared papers by administrative officials and engineers of the National Reclamation Service and Forest Service, with ample provision for volunteer speeches and discussion.

The personnel of the National Irrigation Congress will be as follows:

The permanent officers of the Congress.

The President of the United States.

The Vice-President of the United States.

The Members of the Cabinet.

Members of the United States Senate and House of Representatives.

Governors of States, Territories and Insular Possessions of the United States.

Members of State and Territorial Legislatures.

Ambassadors, Ministers, Consuls and other representatives of Foreign Nations and Colonies.

Members of State, Territorial and Insular Irrigation and Forestry Commissions.

Fifteen Delegates appointed by the Governor of each State or Territory.

Commercial Club, Hospital, Huning Castle, Albuquerque, N. M.

Ten Delegates appointed by the Mayor of each city of the United States of more than twenty-five thousand population.

Five Delegates appointed by the Mayor of each city in the United States of less than twenty-five thousand population.

Five Delegates appointed by each Board of County Commissioners or County Supervisors in the United States.

Five Delegates appointed by each State organization, having as its object the advancement of the public welfare of that State.

Five Delegates appointed by each State Irrigation, Forestry, Agricultural or Horticultural Society or Association.

Five Delegates appointed by each National or Interstate Association interested in the objects sought by the National Irrigation Congress.

Five Delegates by each State Association of professional, commercial, fraternal, patriotic, religious or labor organization.

Two Delegates duly accredited by each Chamber of Commerce, Board of Trade, Immigration Society or Commercial Club.

Two Delegates duly accredited by each regularly organized Irrigation, Agricultural, Horticultural or Forestry Club, Association or Society in the United States.

Two Delegates duly accredited by each Irrigation Company.

Two Delegates duly accredited by each Agricultural College, and by each College or University having chairs of hydraulic engineering or forestry in the United States.

Two Delegates duly accredited by each regularly organized society of engineers in the United States.

Appointment of Delegates should be made as early as possible, and notice of appointment with full name and postoffice address of Delegates forwarded to the Chairman or Secretary of the Board of Control, Albuquerque, New Mexico, U. S. A.

INTERNATIONAL IN SCOPE.

All foreign governments, notably Great Britain, Italy Portugal. Mexico, Cuba and the South American Republics, will be invited to send representatives to the Congress and make exhibits at the Exposition.

Another notable feature of the Congress will be the report of a committee named at the 15th Congress, held at Sacramento in 1907, relative to the desirability of organizing an Inter-National Congress, having a broader and more comprehensive scope and covering all matters touching the conservation and use of national resources of all the countries of the globe. On this subject of con-

Street Scenes in Albuquerque, N. M.

servation of national resources, in a message to the 15th National Irrigation Congress, President Roosevelt said:

WHAT ROOSEVELT SAYS.

"To the Officers and Members of the National Irrigation Congress, Sacramento, Cal.

"Gentlemen: I send you hearty greetings and my earnest wishes for the fullest success of your convention. I congratulate you upon the progress of the great movement you represent. There is no movement more emphatically for the benefit of the small farmer and the small ranchman. There is no other way to assist the actual settler and home-seeker who owns and tills his own land so powerfully as through this movement of yours for the wise use and preservation of the waters and forests. The reclamation service and the forest service are directly adapted to help the small man make and maintain a prosperous home; and they are doing it. These services were recently inspected on the ground by the Secretary of the Interior and the Secretary of Agriculture, who have them in charge, and I congratulate you on the high standards of integrity and efficiency they have attained.

"It is a matter of sincere satisfaction to learn that you will not confine yourselves to the questions of irrigation and forestry, nor even to the control, use and conservation of streams, vastly important as these are to every citizen of the United States. I am glad to know that you will give attention also to that problem of which forestry and irrigation and water conservation form but a part, the fundamental problem of the conservation of all natural resources. The work of the government along the line of this greater problem cannot be made effective without the approval and support of the whole body of citizens. By educating, guiding and crystalizing public sentiment in this direction by bringing the needs of the people clearly and forcibly to the knowledge of their representatives, you are rendering a service of the first importance to the nation as a whole.

"THEODORE ROOSEVELT."

INTER-STATE INDUSTRIAL EXPOSITION.

In connection with the meeting of the Congress, and by way of incentive to the promotion of irrigation and the settlement of lands in the areas under the various irrigation projects now being constructed under the National Reclamation Act, the Board of Control announces the holding of an Inter-State Industrial Expo-

Business Blocks in Albuquerque, N. M.

sition, to which all states and localities interested in irrigation are invited to send exhibits. Ample space and accommodations for the most elaborate collective state exhibits will be provided. Magnificent trophies and cash premiums, medals, certificates and awards will be given by the Board, or under its direction and control, complete information in relation to which may be had upon application to the officers of the Board of Control.

CONVENTION HALL.

The people of New Mexico and of the Duke City—Albuquerque—are erecting a magnificent Convention Hall for the accommodation of the Congress. This structure will cost upwards of thirty thousand dollars when completed and will seat three thousand five hundred delegates. It is built of cement, brick and steel and is a very handsome building.

Albuquerque and New Mexico will be the scene in September and October of the greatest irrigation celebration and demonstration in the history of the Southwest.

The purpose is to emphasize the importance and value of irrigation as a factor in National development and to make an object lesson with exhibits of the resources, agricultural, horticultural, live stock and minerals of the Territory of New Mexico, thus demonstrating the fitness of our people for self government and entrance into the Union as a sovereign state.

This will extend over a period of two weeks and will include the National Irrigation Congress—the Interstate Industrial Exposition and the 28th Annual New Mexico Territorial Fair. There will also be receptions, excursions and other entertainments in various portions of the Territory to which all of the delegates will be invited. The musical part of the program during the Congress will be on a higher and more artistic plane than any ever attempted in the history of the country.

The electrical illumination of the City of Albuquerque, the decorative arches commemorative of this great event, the participation by the National Government in the exhibits and displays, the military and the navy, all will be on a par with the great expositions of the country heretofore held.

The live stock show will be unsurpassed by anything in that line ever held west of Chicago or Kansas City.

Preparations will be made for the comfort and entertainment of thousands of visitors.

The most impressive ceremonies will mark the opening and closing of the Congress and Exposition.

San Juan County Exhibit at Colorado State Fair, October, 1907, Awarded Blue Ribbon and Red Ribbon and Sweep Stake Prizes.

The people of New Mexico are enthusiastic in the promotion of this great enterprise, this campaign of publicity and in their efforts to provide for the pleasure and comfort of delegates and visitors will leave nothing undone that energetic management can foresee. Everything will be done for the general welfare of the people who will honor us with their presence.

We feel certain that this Congress will have an added interest to many because it will be held on the banks of the historic Rio Grande, where over three hundred and fifty years ago Francisco Vasquez de Coronado and his hosts of Spanish soldiers of fortune established the first military post in this portion of America and planted the banner of Santiago, claiming the whole country for the Spanish Crown.

The climate of this portion of New Mexico in September and October is most delightful. Do not be afraid of hot weather. The greatest surprise you will have will be in the climatic conditions. You will sleep under bankets every night of your stay, and the days will be the October days of the north, and when you leave us for your eastern or northern homes you will say that the Land of Sunshine has a climate—"winter or summer, fall or spring, day or night, in sunlight, moonlight or starlight the most delightful in all the world."

Delegates appointed to the Congress should communicate with the Board of Control at Albuquerque, New Mexico, in order that accommodations may be reserved.

The Board of Control, consisting of prominent citizens of New Mexico, supported by unanimous sentiment throughout the Territory, and aided by committees representing all counties, districts and towns in the Territory, are preparing a splendid program of entertainment and will accord Delegates a cordial welcome.

Special railway rates will be made for delegates to the Congress and will prevail over all Transcontinental lines, with stop-over privileges at all Western points.

Special excursions will enable delegates to see all of New Mexico that is reached by railway lines. These excursions will cover the great Mesilla Valley in the lower Rio Grande, the far famed Pecos Valley of southeastern New Mexico, the ancient city of Santa Fe, the oldest capital in the United States, the mesa farming regions of San Miguel and Colfax Counties, the mining districts of Grant County, a special excursion to the Grand Canyon of Arizona, America's most stupendous natural wonder, to the site of the great Elephant Butte Dam, where the Government of the United States has commenced the expenditure of over eight

Alvarado Hotel, Albuquerque, N. M.

millions of dollars, in the construction of the greatest reservoir for irrigation purposes in the world, and to the Hondo and Carlsbad projects in the Pecos Valley, both completed and in operation, showing completely two of the greatest irrigation enterprises in the Territory.

The excursion to the Grand Canyon will also include a trip to the great Roosevelt dam in Arizona, including the cities of Prescott and Phoenix.

To delegates coming from the Rocky mountain and Pacific coast states a choice of routes, going and returning may be had.

Delegates from Eastern points will be able to obtain the usual Pacific coast tourist rate, with all of the side trip accommodations usually accompanying that class of ticket.

A side trip from the City of Albuquerque to the City of Mexico at a very reasonable rate is being arranged, particulars as to which will be announced later.

Information relative to the Congress, Interstate Industrial Exposition, program, rates, hotels and other data, will be furnished upon request from the Irrigation Congress Headquarters, Albuquerque, New Mexico.

WILLARD S. HOPEWELL,
Chairman, Board of Control.
R. E. TWITCHELL,
Secretary, Board of Control.

Picking Apples in San Juan County Orchard.

The Land of Sunshine NEW MEXICO The Land of Opportunity

DEVELOPMENT.

Development of the natural resources of New Mexico is proceeding with astonishing rapidity. The acreage of land under cultivation has practically doubled within two years. It now exceeds 1,000,000 acres. National and private irrigation projects now under way will add 500,000 acres. New Mexico has more than 40,000,000 acres of the public domain open to entry. It has been discovered that a vast area of this land may be successfully cultivated by dry, or scientific farming—meaning farming without irrigation. Thousands of homeseekers have established homes and farms on this character of land within the past two years. Some 25,000 land entries were made in New Mexico between July 1st, 1906, and January 1st, 1908, ninety per cent of them by actual settlers.

AGRICULTURE AND HORTICULTURE.

New Mexico land is today producing successfully practically every crop common to the temperate zone. This is the land of the small and highly cultivated farm. Agriculture by irrigation is ideal husbandry. There can be no crop failure where water is applied as needed and a forty-acre irrigated farm in New Mexico, properly cultivated is certain to return an independent income. New Mexico fruit is the finest in the world. The fruit is perfect in size, color and flavor and there is a waiting market for every pound grown. Ten acres of bearing orchard in New Mexico insures a moderate fortune to the owner. Sugar beets grown in New Mexico show a higher percentage of sugar than those grown in any of the great beet growing sections of the west. The growing season in New Mexico is long. In many sections four cuttings of alfalfa are the rule.

CLIMATE.

The climate is near to perfection. High altitude, large percentage of sunshine and dry, invigorating atmosphere make for speedy alleviation of pulmonary troubles. Literally thousands of consumptives, who have come in time, have found health in New

Albuquerque Schools.

Mexico. The United States government has endorsed this climate for treatment of consumption by establishing its great sanitaria at Fort Stanton and Fort Bayard. A heat prostration has never been known. Summer nights are always cool. Winters are mild, short and sunshiny. Accommodations for health seekers in hotels, sanitaria and out-of-door resorts, are plentiful and good. There are many mineral springs of established therapeutic value and reputation.

EDUCATIONAL.

In 1907 New Mexico expended $484,467.49 in maintenance of her public school system alone. Denominational and other schools expended $250,000 more. The higher educational system is complete.

SOCIAL.

New Mexico is well governed, its people law abiding. Its cities and towns are supplied with every modern convenience. Public libraries are numerous; all the established churches are well represented. Social conditions vary little in the cities and towns of New Mexico from those found in cities and towns of equal population in the older sections of the nation.

NEW MEXICO HAS

40,000,000 acres of public domain, open to entry.

A population of more than 400,000, increasing at the rate of 50,000 a year.

1,000,000 acres of land under cultivation; half a million more ready to be reclaimed.

A great live stock industry, with 6,000,000 sheep, more than half a million cattle, 200,000 goats, horses and swine.

2,950 miles of railroad in operation, 1,000 miles projected and under construction.

10,000,000,000 tons of marketable coal in sight, and thousands of acres of unprospected coal bearing lands.

Millions in copper, gold, silver, lead, zinc and rarer metals, and unlimited supplies of building materials.

A great and rapidly growing industry in manufacture of lumber.

Three national irrigation projects, two of them completed, the third the largest irrigation project ever attempted in the history of the world, the Elephant Butte project, to cost $7,200,000.

New Mexico is the land of opportunity for the homeseeker and investor, the land of sunshine and strength and health for the healthseeker.

Carlsbad Project, N. M.

Felix Dam, Pecos Valley, N. M.

NEW MEXICO IRRIGATION PROJECTS.

The practice of irrigation is as old as civilization. The Aztecs and pre-historic races in the arid regions of the southwestern portions of the United States irrigated hundreds of thousands of acres and some noted archaeologists state that there were millions of people who depended upon irrigation for the growth and maturing of their crops. The climate made this necessary and the ruins of ancient irrigation ditches in some portions of New Mexico bear out the statements of the scientists who are responsible for the estimates as to the numbers who were at one time dependent upon irrigation in semi-arid America. The oldest known ditches in New Mexico, relative to which there is documentary evidence, date about the last of the seventeenth century.

Historically speaking, the Territory of New Mexico is the greatest antiquity of the United States. Settled as it was by the Spaniards, earlier than any other portion of the United States until the coming of the great transcontinental railways, this vast expanse of territory has remained for the most part unknown.

All of the principal valleys of the Territory have been irrigated for many years but it has remained for modern enterprise and ready capital to place the irrigation idea upon a proper basis, and today, there are many irrigation projects, completed or under construction in the Territory of New Mexico, some of which will be described.

The greatest of all these enterprises are those undertaken by the Reclamation Service of the United States under what is known as the National Reclamation Act. There are three of these projects in the Territory of New Mexico, the Hondo, the Carlsbad and the Rio Grande, the two former being completed and the last named being now in course of construction. Upon these projects, the government will expend upwards of ten millions of dollars, over eight million of which will be used in building the Rio Grande project, the dam for which will be located in the Rio Grande near Elephant Butte.

Concrete Aqueduct Over Pecos River, Carlsbad Project, N. M.

THE CARLSBAD PROJECT.

The Carlsbad project possesses the best climate in the Arid West which means the best on earth.

The Carlsbad project is capable of the greatest diversity of crops and fruits because of a happy combination of altitude, latitude and sunshine, which permits the production of both cotton and wheat, peaches and winter apples, alfalfa, and all kinds of live stock, free from disease. No worm or insect on fruit. No boll weevil. No hog cholera. No foot rot.

Under the Carlsbad project are produced the very best peaches in the world commanding the highest prices and put upon the market at the best time of the year, after Southern crops are over and before Northern crops begin, while its apples, pears, plums, quinces, cherries and grapes are equal to the best.

Under the Carlsbad project every acre carries with it one share of stock in the Pecos Water Users' Association, which entitles it to its pro rata interest in a water supply approved and backed by the United States Government, controlled and distributed by its expert engineers, sold at actual cost and steadily increasing in value.

Under the Carlsbad project the soil has been examined, classified and approved by the engineers of the bureau of soils of the United States Government.

Under the Carlsbad project all titles to watered land have been passed upon by the attorney for the Water Users' Association subject to approval of attorneys representing the United States.

The Carlsbad project is named from valuable medicinal springs, destined some day to attract wide attention, which are now free for the use of all and may be just what you or some member of your family requires.

The Carlsbad project possesses the peculiar characteristics that its most natural products are high-priced—fruits, melons, celery, asparagus, onions, tomatoes.

Under the Carlsbad project an acre of peach trees, properly selected and cared for in full bearing, will yield from $500 to $1,000 gross in one year. An orchard of ten acres will average $300 per acre net throughout its bearing years. There has been one failure

One of the Country Roads Near Carlsbad' Pecos Valley,
Southeast New Mexico.

in fifteen years. It is not how much, but how well that counts in fruit growing and farming as in all pursuits in life.

The beautiful City of Carlsbad lies in the midst of the great area irrigated under this project. It has been most appropriately named "Carlsbad the Beautiful," and it is not difficult for the "stranger within the gates" to endorse the expression, because there are many features of the town which certainly give rise to it. The streets are wide and well kept and the sidewalks skirting them are broader than those usually provided in other territorial towns. In many places the crosswalks are paved with cement in the same manner as the sidewalks themselves and there is a general architectural finish to the residences which taken in conjunction with the ample proportions of the business houses and the broad porches of the hotels in the center of the town lend more the impression of a resort than of a commercial center. To cap it all the county of Eddy has erected here the handsomest court house in the Territory surrounded with a well irrigated park, a contribution to the general finish of the city by no means to be underrated.

IRRIGATION ITS LIFE.

Carlsbad is the creature to a great extent of irrigation. It lies on the west bank of the Pecos rived now dammed at four different points within twenty-five miles to the north and south of the city. Three of these dams are north of Carlsbad and two of them are under control of the U. S. Government. The latter are the important links in the first completed government irrigation project in the United States and together they present one of the most interesting studies in the Territory. The work was originally undertaken by private capitalists for whom it proved too great a task, the entire project meeting with disaster in the floods of 1904 which swept away the dam at the intake of the main canal and carried with it the hopes of the people who had established themselves along the twenty miles of irrigated country to the south. The history of the various and persistent efforts of the Carlsbad people to bring this great reclamation scheme to permanent success would make interesting reading but space preventing we must content ourselves with the statement that the whole matter has passed under federal control and with the completion of the Avalon diversion dam seven miles north of the city, it is once more ready for use and the curtain has been drawn forever on the period of speculation and uncertainty. Between 20,000 and 40,000 acres will eventually be reclaimed through the project and much of this ground is

Street Scenes, Carlsbad, New Mexico

on the market as a result of the requirement of the Interior Department to the effect that no one individual may have water upon more than 160 acres, in addition to which he must personally reside on the land. In the early days the ground was held in larger tracts and often for speculative purposes, but the above stipulation has put an end to this and it is easy to foresee that the forcing of the land upon the market will result in a rapid increase in population and importance, for the city and environs. The fact also that the productive quality of the valley soil at this point has never been questioned adds to the assurance with which prospective homeseekers may approach the subject of purchase and furnishes the final basis for the prophesy of the largely increased land values.

POWER FOR MANUFACTURING.

One of the thoughts which presents itself to the observer visiting for the first time the great dams at McMillan and Avalon is that much of the immense power which is now going to waste there must some day find an outlet in manufacturing and other enterprises. It is estimated that at certain periods of the year the dam at Avalon alone will develop from 4,000 to 6,000 horsepower, enough to railroad and light the entire irrigated district and in addition furnish the city with power for all purposes including that of manufacturing on a generous scale. At present the town itself is lighted from two dams the Tansill, one-half mile to the north of the city, and from that of the Public Utilities company six miles to the south, the Tansill property being held under lease by that company. The two together furnish 300 horsepower and in addition to supplying the lighting system, the city water supply also under the company's control is pumped into a standpipe for general distribution throughout the town. The possibilities in this direction cannot be overestimated and some day no doubt they will be fully availed of whenever the settlement of the district shall have reached the point where the expense of installing the necessary plant appears to be justified.

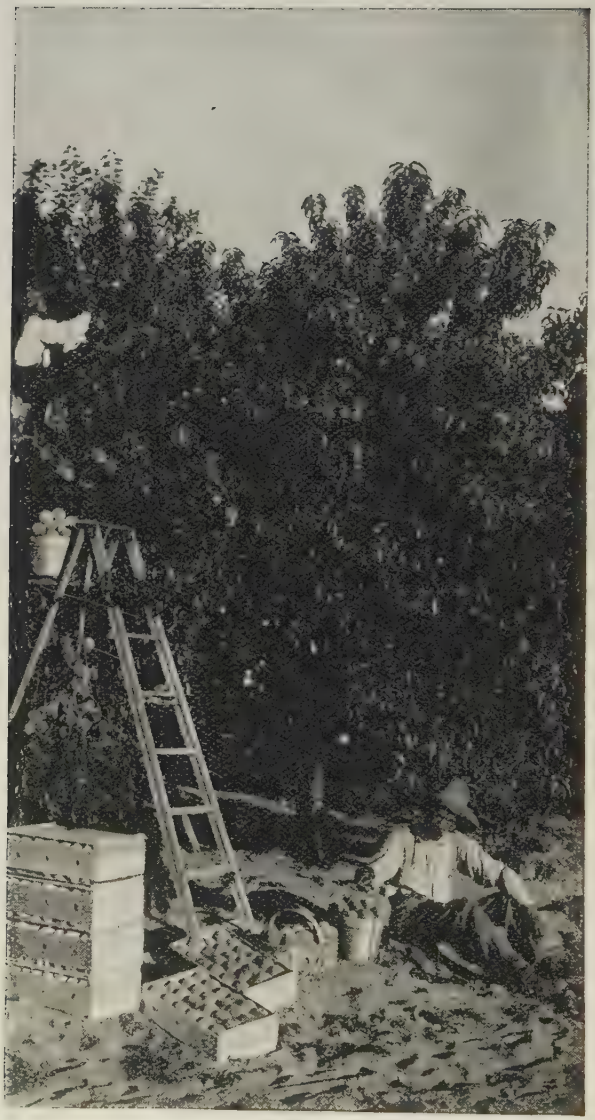
FERTILITY OF THE SOIL.

The soil about Carlsbad is generally a sandy loam underlain at a distance of from three to thirty feet with gravel or rock. Its quality of water retention has been demonstrated and it continues to mainain its original strength under intensive conditions. It also responds easily to cultivation and on that account is less costly to work than that of many other localities. From it is produced an unusual variety of farm and orchard products and the region vies

Scene of the Carlsbad Project—Headgate and Lake McMillan Reservoir, New Mexico.

with the entire valley in supplying the eastern and northern markets with the largest, best flavored and most perfectly colored fruit to be found in the United States. Corn and sorghum together with small grains of all descriptions are grown here with a minimum of labor and a maximum of yield and garden truck of all descriptions thrives throughout the entire district. Alfalfa reaches a fourth and fifth cutting and in addition there are 1,000 acres of cotton under cultivation in the neighborhood. There is also an increasing tendency among farmers toward the raising of poultry and bee culture both of which meet with success in the hands of those who understand the special problems presented. If the limitations of this article permitted, many interesting facts and figures might be given regarding the past performances of this region in the matter of soil production, but inasmuch as this is all recorded in the literature furnished by the Commercial Club of the town, the reader may if further interested send and get it for himself, or what is better take the train over the new cut-off and investigate on the ground.

The City of Carlsbad shares with the entire territory in climatic conditions, which are unrivaled the world over. Its altitude is slightly in excess of 3,100 feet and it is so surrounded by hills that winds of winter and spring are screened to a great degree from the excesses elsewhere experienced. Three hundred days of sunshine during the year is the average record and the sufferer from lung and bronchial weakness finds here the relief for which he is seeking. Many of those already on the ground bear testimony to the magic effects of outdoor life in this region and are daily performing tasks for which they were totally unfitted in the localities from which they came. The conditions necessary to comfort and good living are also found in Carlsbad, which is well provided with water, electric light and telephone by the Public Utilities company, controlled by eastern capital. There are a number of fine hotels, prominent among which is the Schlitz, a $50,000 building, owned by and named after the Milwaukee brewer, and the Palace, an attractive structure on Main street near the depot. The city owns a combination city hall and fire house and there is a fine public school building providing at present for more than 600 scholars of all grades from high school down. The Catholic sisters also conduct a girls' school at Carlsbad and their building is one of the features of the town. There are five churches all owning their own structures and representing the Methodist, Episcopal, Baptist, Presbyterian and Catholic denominations, and recently through the efforts of the ladies of Carlsbad a public reading room was established in the town. In addition both the Masonic and



Fruit Packing, Pecos Valley, N. M.

Odd Fellows lodges of Carlsbad have constructed their own headquarters near the center of the business section.

The life of the mercantile community at Carlsbad centers around its progressive Commercial Club, which now has a membership of nearly 100, including most all the merchants and professional men of the city. Its business is to discuss and endorse where necessary matters pertaining to the welfare of the town and territory at large, to aid in the establishment of new enterprises and the dissemination of literature calculated to bring new people into the district. It is particularly active this year and will no doubt demonstrate its usefulness by supervising the collection of a record breaking exhibit for the Irrigation Congress to be held in Albuquerque this fall. The club occupies handsome quarters which are frequently used for social as well as business purposes and for a town of 3,000 population Carlsbad has every reason to be proud of the organization. In their efforts for the uplift and growth of the city, the people of Carlsbad are ably seconded by the presence of two live and aggressive newspapers, both of which are published weekly by men who have long been favorably known to the profession throughout the territory. The "Carlsbad Current" is Democratic in politics and is edited by William H. Mullane, while the "Carlsbad Argus" represents Republican politics and is under the direction of W. T. Reed.

There are two live banking institutions in this city and about fifty mercantile establishments, most of which are housed in buildings of brick or stone construction and in which both wholesale and retail lines are represented. As a whole, the stores at Carlsbad are more attractive and much more extensive than at other points in the Pecos valley, and the impression left upon the visitor is one of substantiality rather than of mushroom growth.

Taken all in all, Carlsbad with its wealth of foliage, its well kept lawns and gardens, its wide porched hotels, its great irrigation project and consequent opportunities for occupation and investment, together with its substantial citizenship, undoubtedly offers one of the most attracive points for the homeseeker in the entire territory and on these accounts it has every reason to expect that it will eventually become the beneficiary of the unprecedented influx of population which is now finding its way into the land of sunshine and of opportunity.

Spillway No. 1—Hondo Project, N. M.

Inlet Tower—Hondo Project, N. M.

THE FAR FAMED PECOS VALLEY.

THE HONDO PROJECT.

Modern ditches, supplied with water from a magnificent river and the copious streams of many artesian wells are bringing the Pecos Valley in Chaves County, New Mexico, of which the beautiful city of Roswell is the metropolis, into an unrivaled state of productiveness. In addition to the water supply already developed, which has been sufficient to create many magnificent farms, the government is now ready to supply water from the Hondo reservoir. Rivers fed by streams and snow that lies deep on the high mountains towering above the valley will give a supply of water for all the lands that may be reached by the canals to be constructed. The conformation of the country is such that the engineers had no difficulty in locating reservoir sites.

The Hondo reservoir is twelve miles southwest of Roswell. The total cost of this project will be $275,000.00. The few obstacles that the government has to contend with in this place make it possible to obtain results beyond proportion to cost. The land to be irrigated is immediately adjoining the city of Roswell and has an area of ten thousand acres.

Because of the few obstacles to be overcome, the Hondo was among the first of the government irrigation projects to be completed. The cost per acre for the reclaimed area is $27.50, making the yearly installments only $2.75 to be returned to the government treasury. At the end of ten years no other payments are required.

The beauty of the Pecos Valley makes a strong impression upon strangers and is a continued pleasure to those who reside there. The climate is of the very best in the mountain country. There are beautiful driveways, lined with magnificent trees. Lofty mountains are seen one hundred miles to the West. The mountains are full of game and the streams are full of fish.

The most fruitful portion of the irrigated district of the Pecos Valley lies in Chaves County. It extends along the west side of the Pecos River and is nearly parallel with it. It is far from being an isolated section. It is brought directly into the world by ade-

An Artesian Well in the Pecos Valley, New Mexico.

quate railroad connections. It is traversed by the Pecos Valley branch of the Atchison, Topeka and Santa Fe Railway, which extends from Pecos, Texas, on the Texas and Pacific Railroad to Roswell, busy center of the region's industry, a distance of 164 miles, and from Roswell in a northeasterly direction to Amarillo, Texas. By this means the Pecos Valley has an outlet to Eastern and Southern Texas and to El Paso and the West over the Texas and Pacific Railroad through Pecos; and to Colorado, southern and eastern Texas, Kansas City, St. Louis, Chicago and all the East through Amarillo. With the enlightened class of people that is populating it and its close touch with the world, the Pecos Valley and Roswell offer all the social and educational happiness and advantages that can be found in any progressive community.

While almost anything in the way of a profitable crop will grow in the Pecos Valley, it is alfalfa that brings the quickest and surest money. It is the crop from which the new settler usually obtains his start and which makes him a good living while other crops that bring heavier returns are coming into bearing. Alfalfa means livestock and dairy products and these are a profitable source of income in any region where they can be produced successfully. It is said to be a wonderful region for garden truck and all sorts of fruits. Especially are apples grown in the Pecos in great abundance and of a quality and color that is said to approach as near to perfection as ever attained with this fruit, that, while accused of being the medium in the early fall of man is devoured by him at this day with an avidity that shows no rancor over the past. Apples from the Pecos are said to be eagerly sought in the markets of the East and London, and because the supply is not sufficient to meet the demand, the prices are always high. Many new orchards are being set out, the people about Roswell seeing permanent profit in the production of this fruit. More will be said concerning it later.

A Kentuckian, named John Chisum, was the pioneer of the Pecos Valley, establishing himself in the Pecos in the year 1878. Mr. Chisum was searching for a place in which to raise cattle on a large scale and he found the now celebrated South Springs, flowing eighty cubic feet per second of cold, pure water. These form the Southspring River, which empties into the Pecos six miles east. Chisum acquired 7,500 acres of land, including the springs, and being then 400 miles from a railroad, hauled in cereals, young fruit trees and machinery with ox teams. The planting done then by this Kentuckian is the horticultural romance of the Valley. He showed by his husbandry what might be expected of the soils

Eddy County Court House, Carlsbad, N. M.

when watered. He did not overlook beauty and comfort, either. Shade tree slips stuck into the ground by him are today stately trees that screen with interlacing branches miles of driveways along the ditches.

OLD APPLE ORCHARD BEARS HEAVILY.

The five-acre apple orchard planted by Chisum twenty-eight years ago is today one of the show-things of the valley. Those old trees, pioneers of the horticultural history of the Pecos, are sturdy veterans, with spreading branches and thick trunks, vigorous and healthy, bearing each year a heavy burden of the finest fruit. In all the years they have never known a disease and their fruit has always been perfect. The apple industry in the valley has reached great proportions since these Chisum trees began to yield their treasures and show the way. Results from all the orchards have been splendid.

Noting the productiveness of the Chisum apple trees the present owner of the ranch decided that there was big money in growing apples and in the winter of 1894-5 he set out a large orchard—450 acres. This orchard has been giving money returns for years and from it there have been sent to the markets of America and some of those in Europe thousands of bushels of as fine apples as any man ever ate. This orchard is now in what in other regions would be the zenith of productiveness, although the trees have not yet reached their full size or bearing capacity and the crops they produce are beyond those of fully matured trees in many other apple producing parts of the country.

The growing season is nine months in the year in the Pecos and apple trees come into bearing much earlier than in the North. The trees usually bloom early in April and the harvest of Fall apples generally begins about the middle of August. Jonathans and some other varieties are then ripe and sell at high prices, as they reach the market earlier than those of less favored regions. The harvest of winter varieties ends about November 1. Owing to their vigorous growth and freedom from fungus diseases, the apples of the Pecos keep as well as any grown in the North.

The "Hagerman Apples" are known from London to Texas. They have taken the highest honors at the great expositions. It is not claimed that Pecos Valley soil, water and sunshine will, without the aid of man's work, grow these apples. The natural conditions are there, but there must be work and intelligence applied to bring the fruitage. All methods must be skilfully applied, but the man who does not know anything of apple grow-

An Artesian Well in the Pecos Valley, N. M.

ing can easily learn how to produce them. There is always instruction and guidance if he will seek them. His own brains and application must do the rest.

As man is stronger here in the favored Pecos Valley, so is a fruit tree. For that reason an intermission in crops is far less frequent here than in the colder north, where man and tree are both taxed by the rigors of climate. "One year on and one year off" is by no means as common in the Roswell region as in the North. Because of the long growing season and for other reasons that time will make known, the trees recover their strength after one crop and are ready for another the next year. Their rests are few.

There is in the Chisum ranch orchard a block of 1,500 Missouri Pippin trees that had a full crop the fourth year after planting and have since borne four consecutive heavy crops of perfect apples.

APPLES SHIPPED TO DISTANT POINTS.

The Pecos Valley apples, though many are shipped to New York and London, are sold principally in Texas and New Orleans, in one-bushel boxes and in barrels. The rate of freight from the valley to the markets is reasonable and the service is good. Icing is not necessary, excepting early in the season. One thing that gives the Pecos Valley apples great advantage in the market as sellers is their bright red color. This color is produced by the cool nights and the sunshine almost every day in the Fall.

Here are some of the figures that you want, now that you have been told by the Commercial Club what a beautiful and productive place the Valley of the Pecos is: You obtain forty acres of raw land, with a perpetual water right. It will cost you, say $50 an acre. You don't have to wait long if you go right to work, to begin getting your money back and making profit. Alfalfa planted in September can be cut from three to four times the first summer, and will yield at each cutting from three-quarters of a ton to one ton an acre. This hay will bring an average of $10 a ton, or $30 an acre the first year. Next year the cuttings will be from five to six tons an acre, making a return of $50 or $60. Alfalfa can be cut, cured and stacked at $1.50 per ton. This leaves a net profit to the Pecos Valley grower of from $42 to $50 an acre the second year. Land with a good stand of alfalfa sells readily now for from $100 to $250 an acre. An additional income can be obtained by pasturing livestock on the alfalfa fields for four or five months in the winter. These statements are all conservative and in no way exaggerated, the Roswell Commercial Club

A Glimpse of Carlsbad, N. M.

says, and it will gladly refer prospective settlers to farmers who have already made their homes there.

Forty acres are as much as one family can successfully cultivate in this valley and it is enough to bring ease to a very large family, so productive is the land and so certain the crops. The advice is to plant twenty acres in alfalfa, ten acres in apples and pears and the remainder in celery, vegetables and garden truck. Here are the returns as estimated: Alfalfa, 110 tons worth $1,100; apples and pears, when bearing, for from $2,000 to $3,000 on the trees, while the celery and garden truck will give a net income of $2,000 more.

Celery is proving one of the great sources of quick wealth in the valley. A quality that cannot be surpassed in the world can be grown in this soil, it has been discovered, and the farmers have seized the opportunity without delay. This crop at the present time is declared to be netting some of the farmers $400 an acre, the gross returns being $600. The fine quality of the product creates a demand beyond the supply and it does not look as if the industry could be overdone.

The settler in the Pecos Valley has no fear of drought nor of too much rain. There can never be a crop failure. There is nothing in any season to prevent luxuriant growth and nothing to destroy it.

W. S. HOPEWELL, ALBUQUERQUE, NEW MEXICO.
Chairman Board of Control.

THE RIO GRANDE PROJECT.

The Elephant Butte to be the largest reservoir.

It will water 180,000 acres in New Mexico, 20,000 in Texas, and 25,000 in the Republic of Mexico.

Construction has commenced upon the great Elephant Butte Dam. The Rio Grande project will be one of the greatest undertaken by the Reclamation Service.

Under this project water will be put upon 180,000 acres of land, a large part of which is already irrigated from ditches constructed before the government took hold of the project. These lands are supplied with water by means of the Leasburg diversion dam, costing $250,000.00 and which was opened for use on the 12th of February, 1908.

Of the land to be irrigated under the Rio Grande project one hundred and ten thousand acres are in New Mexico, lying in the Rincon and Mesilla Valleys; forty-five thousand in Texas, with the city of El Paso in the center and twenty-five thousand acres in the Republic of Mexico, the irrigation of which lands the United States has guaranteed because of rights that the Republic of Mexico claimed to have in the water of the Rio Grande. The expense per acre for this project will be about forty dollars, according to present estimates.

The big dam which will store the water for irrigating these lands will be constructed in a gorge at what is known as Elephant Butte, a picturesque point about fifty miles above Rincon. It is west of Engle, New Mexico. This dam is not to be the largest in the world but it is the ranking one in size among all the undertakings of the Reclamation Service. Its base will rest in solid rock sixty-five feet below the bed of the river and the upper portion will rise 190 feet above low water. Its total width will be the width of the river at the point of construction—1,150 feet. It will taper like a wedge in order to accommodate itself to the rocky pass in which it is to be constructed, and at bed rock, far down beneath the sand and silt, it will be only 250 feet wide.

At the foundation the dam will be 180 feet thick of solid masonry and will gradually diminish, as the strain upon it grows less, until at the top it will be but twenty feet thick. The spillways are

R. E. TWITCHELL, EAST LAS VEGAS, NEW MEXICO.
Secretary, Board of Control.

to be 15 feet above the crest, giving a reservoir depth of 175 feet at the lower end. There will be a wagon road across the top of the dam.

The reservoir that will be created will be the largest artificial body of water of this particular class in the world. It will be forty-five miles long and its width will be that of the valley which will be submerged, which is several miles in places. The storage capacity will be 2,000,000 acre feet and 38,400 acres will be submerged.

It is not likely that it will ever be necessary to enlarge the storage capacity of this reservoir, as under the present plans its capacity will be far greater than needed to irrigate the 180,000 acres of land that are to be served from it, but if there should come a time when more water is needed the capacity of the lake could be increased to 4,000,000 or 6,000,000 acre feet by adding twenty or forty feet to the height of the dam. The dam, as it will stand, will capture the flood waters of the Rio Grande watershed in New Mexico and Colorado. The engineers have established the fact that the average yearly flow of the river is 800,000 acre feet. It is estimated that the lands under the system will require about 600,000 acre feet a year. This will leave a surplus of 1,400,000 acre feet if the reservoir is filled.

It is necessary to have a large dam that there may be no danger of the reservoir becoming filled with silt, of which the waters of the Rio Grande carry two per cent. Most of this will flow away with the water that passes through the sluice gates and be carried to the lands, which it will help to keep in their present state of richness. There is no particular desire to have this silt on the land, which is mostly made up of deposits of that nature, but there is no way to get rid of it, and it would not do to let it settle in the ditches. Chief Engineer Hall estimates that it would take eighty years to fill the reservoir with silt to the level of 1,400,000 acre feet. There will need be no apprehension from the silt deposits, therefore, during the lives of the farmers of today.

For 300 years prior to 1880 the citizens of Mexico, at the El Paso border, had been irrigating about 25,000 acres of land, just over the line in their country, using about 60,000 acre feet from the Rio Grande. After 1880 diversion of the flow by Americans on the headwaters in Colorado deprived the Mexicans of a large part of their supply by causing a deficiency in the low water flow of the river at the head of their canal. The matter became a subject for international dispute. In lieu of the water diverted the United States entered into a treaty with the Southern Republic, when it planned the Elephant Butte system, whereby

Bernalillo County, Albuquerque Court House.

Mexico is to receive forever from that great reservoir 60,000 acre feet annually. In return the Mexican government has waived all claim to water in the Rio Grande above Fort Quitman, in Texas, the end of the Rio Grande project, and all claims for damages from shortage of water in the past.

Down the length of the mountain-inclosed depression called the Rio Grande Valley, through which the Rio Grande flows, are a chain of fertile smaller valleys that contain the lands to be watered. At the head of these diversion dams and reservoirs will be created to fill the distributing canals. The first of these open areas of rich land is Las Palomas Valley, the next Rincon Valley, then Mesilla Valley, extending down the river to the six miles of narrow way between the converging bluffs that is known as the "Pass." Beyond this the El Paso Valley of Texas and Mexico spreads out.

LEASBURG DIVERSION SUPPLYING WATER.

During the interval before the stupendous task of constructing the Elephant Butte Dam shall have been completed, the government is going ahead with lesser units of the scheme. The first work of the project has been the building of the Leasburg Diversion Dam and Reservoir that will help serve 70,000 acres of land in the Mesilla Valley, much of which has been covered with a private system of canals, that have not, however, been adequate.

An allotment of $200,000 from the reclamation fund for prosecuting this unit was approved by the Secretary of the Interior in 1905. Water has already been turned into this part of the system, 15,000 acres being covered. The dam was built at Penasco Rock, near old Fort Selden, seventeen miles north of Las Cruces. The plans provide for a reinforced concrete weir 600 feet long and 30 feet wide, resting on piles and sheet piling, with Penasco Rock as its east abutment and a concrete pier at its west end. There are about 1,600 feet of earth embankment at its west end. Sluice gates and headways have been provided at Penasco Rock and six miles of canal for connecting the head works with the existing ditches in the valley have been constructed. A change in the river channel has been made about one and one-half miles below Penasco Rock to confine the stream to the west side of the valley.

With the construction of the Elephant Butte reservoir the government, instead of interfering with existing diversions in Colorado, will utilize by storage the unappropriated water that now flows to the Gulf of Mexico periodically in enormous and disastrous floods.

Avenue to Main Building Agricultural College, Mesilla Park, N. M.

It was to make the carrying out of the Rio Grande project possible that the Reclamation Act was extended to embrace Texas.

RINCON AND MESILLA VALLEYS.

Under this gigantic reclamation project the ancient art of irrigation will be revived upon that corner of the United States which has the greatest savor of antiquity of any commonwealth within Columbia's borders. Desert spots that have been awaiting the murmuring voice of the water through the centuries will shake off their mummy clothes with the reclamation achievement of the infant Anglo-Saxon civilization in the Western World and emerge into joyous life in robes of freshest green. Lands already reclaimed by private enterprise will be given a copious permanent supply of moisture. A happy rural population and busy cities will be the early results of this magic. Homeseekers are already leaving regions of discomfort, hardship and ordinary financial gain to establish themselves in this sweep of fruitful land that, through the ages, has been fed by the Rio Grande with rich cargoes of silt borne on its turgid tide, and is now to be given drink to satiation by that bountiful river.

The great reservoir will have a storage capacity sufficient to pour a sheet of water one foot in depth over an area three times as great as the State of Rhode Island. This is a great deal of water and the capture of it by use of the government lasso where the unruly Rio Grande is squeezed in the gorge should result in the growth of enough fruit, vegetables, alfalfa and other products of a rich soil to supply a kingdom.

When you contemplate a lake forty miles long with enough water in it to drown three small states and swelled besides by a river that feeds on the snow of the Rockies, it doesn't take much assurance of engineers to convince you that there will be enough water there to irrigate a very large tract of land, but it is well to have the figures for the sake of exactness. The government surveyors have announced, after the most careful work and gathering of data, that the Elephant Butte irrigation reservoir will store an abundance of water for the irrigation of the 180,000 acres of land having rights in this system, thus making it possible for thousands of those who now reside in the snow bound regions, where the blizzards grip the land in ice clutches in the winter and the humidity makes one gasp like a fish out of water in the summer, to procure homes in sunny, temperate New Mexico—a land where the frost never damages in the colder months and the dryness of the air

Typical Ranch, Mesilla Valley, N. M.

in the summer precludes the possibility of the distressing "steam bath."

There in the "Land of Sunshine," where nature has bestowed her gifts with a bounty unrestrained the husbandman may spend his days and employ his energies upon farms having an adequate and perpetual supply of water, where there will be no crop failures caused by drouths; no sunstrokes, blizzards or cyclones, and where one can plant with an assurance of realizing a full reward for one's labor. To live in this region that has become known as the "Land of Sunshine" means a delightful existence. Health attends the resident and the greatest returns are received for the minimum ratio of toil.

It is expected that in the near future there will be an electric railway, with swiftly moving trains, down the valley from Elephant Butte Dam, through the Mesilla Valley.

The Mesilla Valley, from which the bustling city of Las Cruces —"The Crosses"—seat of government of Dona Ana County, derives its growth, may well be likened to a vast garden, that will extend its area over many more thousands of richly soiled acres when the full flood from the government irrigation system pours over it. This garden, spreading out between the majestic mountain ranges over whose tops the few fleecy clouds of an almost perpetual spring float in the sunshine, like birds of soft plumage at play in the bowl of Heaven, gives invitation to the people of the world to come and make homes of delight and plenty for themselves. The invitation is meeting with response. This is a spot toward which thousands of pleased eyes are turned, where thousands of new people will soon be residing.

Emerging now, all titles cleared and a guaranteed possession for all those who seek lands, after eight years of paralyzing litigation, that halted the advance of this section, the Mesilla Valley is receiving its due and has awakened with alacrity to the call of progress. The way is all cleared, and natural conditions will bring the development that is to make the mountain side, sheltered vale and Las Cruces great as stock and farming community and city.

There are good markets for all produce that may be grown in this valley and railroads to carry the products to them quickly. The New Mexico Bureau of Immigration says in an official publication: "Fruit picked in the Mesilla Valley one morning can be delivered in Denver the next, Kansas City in thirty-six hours and New York City in fifty-two hours." These short shipments make it possible to leave the fruit on the trees until it has attained the best flavor and the price is 30 per cent better than that of fruit

Administration Building, University of New Mexico, Albuquerque.

that has to be longer on the road. The quick transportation to the great eastern centers of transportation gives the same advantage to all other products of garden and orchard.

Farming in the Mesilla Valley has no element of speculation about it. The only thing that taxes the genius of the grower is to choose those products which bring the largest returns. With the necessary labor applied, all crops will bring profit. It may be stated that there will be no results without effort. The soil will not yield big returns here without being properly worked, any more than it will elsewhere and the sweat of one's brow is the price of a bank account. The soil will respond with gratifying liberality, though, to the hand of the energetic tiller. The returns are enormous in comparison with the amount of capital and labor expended.

The farmers have an excellent guide, very near at hand. The New Mexico College of Agriculture and Mechanic Arts is situated in the Mesilla Valley and without expense to the settlers it is experimenting all the time to learn what the soil will produce with the greatest profit and is supplying this information free in printed bulletins. Tests of incalculable value to the farmer are being made all the time.

Apple growing in the Mesilla Valley is an industry that is developing rapidly, the orchardist having found that the profits from this fruit are heavy. The apples produced there are as hard and full flavored as any grown in New York state and many varieties attain a size, beauty of form and color and perfection of flavor not reached in the East. Each tree gives a phenomenal yield. At four years of age it is an exception if props are not needed to support the branches during the bearing season. Fruit growers from many parts of the world have expressed amazement at the extent of ordinary apple crops in this valley.

Those varieties of apples that do well in the Mesilla are the Early Yellow Transparent, Early Harvest, Red Astrachan, Carolina Red June, Summer Pearmain, Ben Davis, Missouri Pippin, McAfee's Nonesuch, White Winter Pearmain, Red Winter Pearmain, Winesap, Alexander, Spitzenberg, Rhode Island Greening, Maidens Blush, Bellflower and Northern Spy. Some of these varieties, which are soft and of inferior quality in the East, assume a different character in the Mesilla and become good shippers.

The climatic conditions are peculiarly good for the production of apples. There are no severe winters, the elevation is sufficient to prevent a sweltering summer heat, the atmosphere becomes entirely dry as soon as the sun sets. These conditions combine to

Scene on the S. P. Miller Ranch, Anthony, in the Rio Grande Valley, New Mexico.

make both summer and winter climate ideal for both animal and vegetable life.

Apple orchards of most varieties will be in heavy bearing the fourth and fifth year. The grower doesn't have to struggle on without an income from his land while the trees are growing. The rich alluvial soil, fertilized afresh with every watering, will bear other crops between the trees, without ill effects to either land or orchard.

The average results obtained from apples when they first come into bearing, according to the figures furnished, are 200 pounds of fruit per tree. There are seventy trees to the acre. At the lowest price ever obtained, 2 cents, the 1,400 pounds from each acre bring $280. After a few years twice this result may be obtained.

Everything that has been said in the foregoing about apples will apply to the pear, it is declared. The size of this fruit is large and the flavor unusually fine in this valley. Garden and farm crops can be grown between these trees also at all times. Five-year-old pear trees are credited with yielding 150 pounds to the tree, of which 100 are set out to the acre. A ready price is 3 cents a pound. Simple arithmetic shows the returns to be $450 an acre. These results will be greatly exceeded a few years later, as with apples.

The peach is an arboreal Methuselah in this valley. There are trees that have been yielding for sixty years and perhaps more. They laugh at time when the wind rustles their branches and each year extend from their venerable arms heavy burdens of the finest fruit. These "Viejos" were planted by the Spaniards at least sixty-five years ago. They are just as prolific and healthy as they were fifty years ago, when they probably reached their zenith.

The peach bears very early in this part of New Mexico. A few dozen peaches on a tree the year after it is planted is usual. Some varieties bear as much as 100 pounds to the tree the third year and the following year double that amount. Failure of crop or destruction by any agency is unknown there. Some of the varieties that have been found to yield abundantly are the Alexander, Amsden, Governor Garland, Mountain Rose and the famous Barley Seedling.

You can set out 100 trees to the acre and if at five years they yield only 200 pounds of peaches to the tree you derive a gross revenue of $600 an acre if you sell for only 3 cents, which is very much below the present ruling price for the best varieties.

There are some pioneer apricot trees in the valley that give evidence of what can be done with this fruit there. These patriarchs

Gasoline Pumping Plant of E. Solignac, Near Deming, N. M.

are older than very old men and are of a size attained by the rougher trees of the forest. They haven't asked much of man except some trimming and have grown sturdily through the decades, without cessation. Mexicans that are tottering to the grave remember picking fruit from these trees when they were children. Looking out of all proportion as single fruit trees, these giants seem equal individually to a whole corner of an average orchard and in the bearing season they glow like the breast of the oriole with a gorge of rich fruit. They are a source of great profit to their fortunate possessors and of wonder to the newcomer. The residents of the valley look for the coming years to bring it fame as the place of a giant race of orchard trees.

Plums, quinces, prunes and all small fruits and almonds grow well in the Mesilla, and the profits are good.

Bermuda onions are sold in the Eastern markets at high prices, being deemed the best produced in the world. Some day the name "Mesilla" will hold an equal rank in onion nomenclature. The pungent tubers produced there are equal in every way to those of Bermuda. All they need is an older name. Astute market men of New York are now selling the New Mexican article as "Bermudas" and obtaining the same price. Fifteen tons an acre is the average crop of Spanish onions in the Mesilla. With careful methods this is often exceeded. They bring 2 cents, or $600 an acre.

Off one acre of land farmers have taken $750 worth of sweet potatoes. This seems to be a most suitable region for this product. If the crop is stored during the winter and sold during the spring and early summer, very high prices can be obtained.

Asparagus, one of the most delicate and healthful vegetables known to the epicure, and which graces the tables of the wealthy at whatever season it can be procured, no matter what the price, grows in its finest form and flavor in the Mesilla. It probably has the record in this valley for marvelous cash returns. This plant root attains great size there and is of the white, tender, succulent nature that dealers prize so greatly. It requires but little care after planting. The portion of the crop that reaches the Eastern cities before winter has completely unloosed his cold grip there brings immense prices, a small package bringing $1 or more. As is well known this vegetable is even better when canned, and in this form that which can not be sold fresh brings a high price.

A bed of asparagus in the Mesilla covering one acre is said to have yielded after the third spring 200 pounds a day for sixty

Thoroughbred Cattle at Las Cruces, New Mexico.

days. It brought 12½ cents a pound, a total of $1,500 for that acre of land.

LAS CRUCES.

The city of Las Cruces itself is one of the most up-to-date of young communities. It is destined to be an important place as Dona Ana County grows under the swift influx of population. Money that seeks investment in town lots and business is already pouring into it. The rush that irrigation is to bring is starting. Las Cruces is beautifully situated on the eastern edge of the valley of which it is the metropolis. The population at this writing is 4,000. The altitude is 3,800 feet and the climate is magnificent. The city is already equipped with a new system of electric lights and a modern water supply is being rushed to completion to meet the demands of the increasing population. There is an ice plant with a large capacity, two flouring mills, an extensive fruit and vegetable cannery and two excellent hotels already in Las Cruces. Capital is looking over the field with a view to further improvement and enterprises. There is a high class system of graded schools, churches of different denominations and four weekly newspapers.

All questions concerning the Mesilla Valley, Las Cruces and surrounding localities will receive prompt attention if letters of inquiry are addressed to the Secretary of the Chamber of Commerce, Las Cruces, New Mexico.

Raised Without Irrigation 1906, Near Las Vegas, N. M.

THE MEADOW LANDS OF NORTHERN NEW MEXICO

SCIENTIFIC FARMING.

The homeseeker can find no more desirable location in the entire west than that which is obtainable in northern and northeastern New Mexico. No better climate; no better land exists anywhere. Abundant water, very shallow, a plentiful supply of timber, fine building stone, an extraordinary market, good roads and beautiful mountain scenery are a few of the delights and benefits this portion of the great Territory of New Mexico affords.

The soil is very dark. It is composed larely of loam mixed with disintegrated granite, volcanic dust, vegetable and animal mold. It has been run over for centuries by buffalo, cattle, sheep and goats and is rich beyond expectation and is not surpassed anywhere in the Great Southwest. The soil is also very deep. It is loose and mellow, works easily and has a great capacity for holding moisture.

The summer has no cyclones and the winter has no blizzards. It is a most healthful place for all animal life and the conditions are ideal for general farming and stock raising. The winters are dry and mild and stock does not suffer from exposure. There is snow and the ground freezes but it requires small quantities of fuel to keep warm and farm operations may be carried on every month in the year.

Grain, grasses, vegetables of every kind have been the staple crops and stock of every description matures well. The finest orchards are raised with small effort. Small fruits and berries grow abundantly.

Large areas of this land may be obtained under the homestead act; large areas are held in private ownership, being located upon old Spanish and Mexican land grants. The titles are without flaw.

Lands not upon the public domain are being sold at prices ranging from three to fifteen dollars per acre, depending upon improvements, nearness to railway lines, towns or cities.

The soil of this region is a rich loam, composed principally of volcanic dust and disintegrated granite, very dark or chocolate color, from two to twelve feet deep, merging into a porous subsoil

of clay, altogether unsurpassed for holding moisture and imparting strength. The unusual crops which have been produced here by indifferent farming make it evident that under practical and scientific culture it can be made to produce as much value to the acre as any other land in the West. The soil has been analyzed by experts and tested in every way to the satisfaction of the most critical. Professor W. H. Campbell, the father of "soil culture" in Western lands, says: "The soil is ideal."

The average rainfall south of the northern boundary line of New Mexico for a distance of upwards of one hundred and seventy-five miles is sixteen inches.

With scientific farming nine to eleven inches of rainfall is considered sufficient for a crop, even in localities where water is from 100 to 300 feet deep. An average of 14 inches during the crop growing season, in a territory where the water lies so close to the surface, is a practical guarantee of sufficient moisture for any crop.

CLIMATE.

New Mexico is considered by all critics one of the healthiest States in the Union. It has vast ranges of high mountains and a rare mountain atmosphere in which no diseases lurk but is possessed of high curative properties. It has a very high percentage of sunshine and yet an adequate percentage of rainfall, as is shown by the table of precipitation. The climate is not only enjoyable for man but is profitable in its conditions for the raising of stock and all kinds of agriculture.

The northeastern part, lying south and east of the mountain ranges which traverse the territory from north to south is the most beautiful portion, and is well watered.

The annual mean temperature is 49 degrees. The winter temperature will average about 31 degrees, seldom touching zero. The average summer temperature is about 75 degrees. These conditions are largely accounted for by the fact that while this country is so far south as to get the bright Southern sun, the altitude and proximity to the mountains tempers the summer heat, and likewise protects the land from the cold blasts of winter. The summer nights are always cool and refreshing, the atmosphere light and dry, completely eradicating malaria, catarrh, asthma and bronchial troubles.

Next to temperature, moisture is the controlling factor in the growth of plants. Not only must there be a sufficient supply of moisture, but it must be properly distributed throughout the grow-

ing season so there may be no deficiency just at the time when the plants need it most.

The "Campbell System" is as applicable to orchards, shade trees and groves as to field crops. It aims to conserve the natural moisture in the soil, to prevent loss by evaporation, and to check the raise of water by capillary attraction to the surface of the soil until such time as it is needed by the growing crop.

This aim is accomplished by a thorough summer tilling and fall plowing. In the great Southwest where 80 per cent of the rainfall comes in the summer months, and scarcely any moisture in the winter, there is no danger of loss of strength by exposing the plowed soil to the sun, in fact, the warm sunshine in the late fall and winter is very favorable to the formation of nitrates and needed gases from organic matter, no leaching of which by rain need be feared. The well plowed soil forms a suitable receptacle to catch and hold the rainfall, and allow it to penetrate into the ground to great depth. By keeping the land well covered with a mulch of loose, well pulverized earth, by means of frequent tillage with disc and drag this moisture is conserved for months, as dust or fine soil makes an almost perfect non-conductor.

That this method of farming is applicable to the land of Northern New Mexico and will produce surprising results and permanent farms in this region is beyond all question. The beauty of it is, it requires no expensive preparations, no unusual skill, no extraordinary machinery. It is merely timely and thorough working of the land to fit it for crops and the saving in the amount of seed used and the great increase in the crop produced pays many times over the cost of the extra work. It will, as a natural consequence, enhance the value of all the land.

STOCK RAISING.

The rich valleys are especially alluring to stock farmers. While the plains and valleys furnish the agricultural lands, the rolling foothills and mesas furnish an abundance of nutritious grasses for pasturage. The mild winter climate, the absence of death dealing blizzards and hail storms makes this section the best breeding grounds in the West. Besides the timothy, alfalfa, and other hay crops grown on the cultivated lands, there are thirteen or fourteen different grass plants indigenous to New Mexico, which are rich in ingredients for fattening stock. The lands are free from cactus and brush. Among the native grasses the black gramma, six weeks' gramma and the Texas or drop seed gramma; the joint grass; the grape vine mesquite; the Watson or short grass, are the leaders.

Packing Apples in San Juan County Orchard.

At present the greatest stock industry is sheep raising. Cattle raisers are rapidly enhancing the value of their herds by improving the blood, and introducing Hereford, Durham, and all the best breeds, all of which do finely in this climate. The goat industry is also large.

There is great opportunity for the mixed farmer here, who will raise his thoroughbred cattle, sheep, goats, and horses. Dairying is a rapidly growing industry and the demand for butter and cheese is always heavy and the prices are high. All animals are healthy, are never troubled by diseases, and can be handled at a minimum of expense.

As in all high altitudes poultry raising is destined to be a source of quick and great profit. This locality has most of the advantages with very few of the disadvantages. Insect pests and diseases are practically unknown. Prices at present, being governed by the supply from Kansas and Nebraska, are very high, and for a long time the home product will profit by this advantage.

The mild winters and the sweetness of the grasses make bee culture easy and profitable. In fact, the honey products have increased six-fold in the last few years and bid fair to become a standard industry.

Gate of Reservoir, Hondo Project. N. M.

OPPORTUNITY.

OPPORTUNITY.

Low priced lands in the United States are rapidly disappearing. This is about the last opportunity we know of to secure lands at original prices. The wise will act promptly while the opportunity lasts. If you have land in the older states, valued high, now is the time to sell it, buy cheaper lands, secure a larger acreage, and lay the foundation for a greater fortune.

The desirable features of location and soil are many, the undesirable few. The land is fertile, the water is shallow, abundant, and pure. The climate is an extraordinary inducement, for while we may all talk of the pleasures of winter, there is nevertheless a great amount of expense attached thereto and a great deal of inconvenience and oftentimes suffering. It is just as well to be in a better climate.

These lands are located along the great Santa Fe Route between Chicago and San Francisco, the great Rock Island, the Santa Fe Central, the El Paso and Southwestern, and the St. Louis, Rocky Mountain and Pacific Railway Systems, which means much for the freight and passenger facilities. Money out at interest is a good thing but money invested in cheap New Mexico land will increase and equal many times the current rate of interest. There is a limit to the acreage of the United States. The last available corner for farming is now being sought out. The population is rapidly increasing and must continue so to do.

The history of the Mississippi and Missouri Valleys has taught men that such lands with such natural beauty, fertility, inexhaustible water of such purity, and climate so inviting, cannot remain at cheap prices. They will double and treble. Come, see and take advantage of your opportunity before "The Last of the Great Western Farming Lands" are sold. No other investment can be so trusted as land. People are looking for safety as well as profits nowadays, and you will find both—quick and sure—in Northeastern New Mexico.

A Tributary of the Pecos River, N. M.

THE CITY OF THE HOLY FAITH.

BY FAR the most interesting town in the Southwest is the City of Santa Fe. Be it from a scenic standpoint or from the historic, archaeologic or climatic view, no other community in the United States can so well lay claim to the appellation of "unique," as this historic city founded in the first decade of sixteen hundred by the Spanish Conquistadores on the site of an important Indian Pueblo, the cacique's house of that prehistoric pueblo being occupied to this day and pointed out to tourists as the "oldest house" in the United States. It stands in the shadow of "the oldest" church, originally erected, so tradition has it, even before the Spaniards made formal settlement at Santa Fe. These structures, together with the "Old Palace," built early in the seventeenth century and continuously occupied by Spanish, Pueblo, Mexican and American governors, since then, would, in themselves, be worthy of a pilgrimage from afar by the tourist, for who would not be interested in the oldest historic monuments in the United States?

Santa Fe lies in the lap of the Sangre de Cristo Range which rises in several peaks to an elevation exceeding 12,500 feet within a few miles of Santa Fe, and from one of which flows the Santa Fe River, rising in two lakelets near the snowline and furnishing Santa Fe with sparkling water from melted snow, absolutely uncontaminated and free from deleterious substances. Seven miles to the east lies the Pecos Forest Reserve of five hundred thousand acres, a natural forest and park of wondrous mountain and canon scenery, of numerous brooks and rivers, of untold mineral wealth, with picturesque summer cottages, a veritable paradise for the sportsman who is after big game such as mountain lion and bear, or in pursuit of deer and other of the gentler denizens of the forest, or the finny tribe of whom the mountain trout is esteemed most highly. Most fortunate is Santa Fe in possessing this vast play-ground across which the Territory with convict labor is building the famous Scenic Highway from Santa Fe to Las Vegas, thirty miles of which are completed and afford a drive that in some respects is unparalelled in this country for scenic beauty. West of Santa Fe, lies another vast natural mountain park, the Jemez Forest Reserve, reaching as far as the Colorado boundary to the north and having with-

The Capitol at Santa Fe.

in its boundary not only hot springs of tried curative properties, gold, copper, silver, mica and other mines, beautiful forests and splendid mountain scenery, the White Rock and Brazos Canons, but also the most interesting archaeological region on the western Continent north of Mexico. Here, within thirty miles of Santa Fe, are twenty thousand cave and cliff dwellings some in the depths of deep chasms and canons, others on volcanic cliffs which are crowned with the ruins of communal buildings that have from one to a thousand and more rooms. Space forbids dwelling upon the wonders of this region, such as the Painted Cave, the Stone Tents, the Lions of Cochiti, the Frijoles Canon, in themselves worthy a summer's outing, and which can be reached from Santa Fe in two hours by train and in five hours by wagon road. North of Santa Fe, beginning with Tesuque, nine miles away, and on a superb scenic wagon road, are the strange Indian pueblos, preserving to this day traditions antedating Columbus, celebrating their feast days with dances of heathen origin and mystic significance, occupied by a gentle and mysterious people. The Nambe Falls, the Espanola and Taos Valleys and numerous ancient mission churches and other points of interest are on this northward branch of one of the main roads into Colorado. In every direction from Santa Fe are the ruins of pueblos once occupied by these "town Indians" and over which are strewn thousands, yea, millions of pieces of prehistoric pottery of various sizes, with occasional arrowheads and other relics of a people at least a thousand years old.

This much of Santa Fe and surroundings from a scenic and prehistoric standpoint, although half has not been enumerated, much less told, for lack of space. Its wealth in a historic sense has been indicated, but merely this. In the Old Palace in which Lew Wallace, then governor of New Mexico, wrote Ben Hur, there have been enacted many stirring events in the past three hundred years, and the Plaza which the Palace faces, could it but talk, would draw brilliant word pictures of happenings that in romance and in thrilling detail would eclipse the tales of the crusades. Bloodshed and martyrdom are within the scope of this story as here centered the turbulent history of three hundred years of conquest. In the Old Palace is a museum containing the most noteworthy collection of southwestern antiquities and books outside of New York and Los Angeles. Dominating the city, are the earthworks of Fort Marcy, and part way beneath its brow, are the ruined walls of the Garrita, the old Spanish custom house and place of execution. On every side are hoary land marks: the Fonda, the terminus of the famous Santa Fe Trail, the Rosario chapel built

The Old Palace at Santa Fe.

in commemoration of the vow of De Vargas who reconquered the city from the Pueblos, ancient shrines, battlefields and historic spots such as that marked by the monument designating where Governor Perez was assassinated less than a century past, or where Kearny addressed the populace after taking possession of the city only five decades ago. Tradition, folk lore and history intermingle as the old timer fondly points out the places where great or startling events occurred. To the man who writes feature stories, the town is an inexhaustible mine of precious raw material.

Santa Fe has good reason to pride itself upon its climate. It has the most equitable weather in the Southwest, the sunshiniest and the healthiest in the United States, not excepting any southwestern or Pacific Coast health resort. In 1907, the highest temperature recorded by the U. S. Weather Bureau at Santa Fe was 87 degrees and there was not a night in the year when the temperature exceeded 60 degrees. What such a cool summer with cool days and cooler nights means to the healthseeker only those who have sweltered in the humid Atlantic Coast or Middle Western states can appreciate. Nor do these cool summers mean cold winters. There was not a day on which the temperature in the sun did not exceed 30 degrees. In 1907, the lowest temperature recorded was five degrees above zero and that was during the night. The average precipitation is between 14 and 15 inches a year, enough for dry farming yet dry enough for the healthseeker. There were only 39 days last year that the weather bureau classified as cloudy. That does not mean 39 days without sun, but so many days on which the cloudiness exceeded the sunshine. Most of the cloudy days occurred in summer still further tempering the moderate heat of the day. Month after month passes during which there is not a single day without sunshine, and sunshine in the southwest means a good deal more than in the moisture laden air of the sea levels. Coupled with it is a dry, rarefied air, antiseptic in the fullest sense of the term, an atmosphere bracing and healthgiving, and sunshine in which the bacteria of disease can not live. Add to this, the odor and ozone from the pine and spruce of the vast forests which spread out in every direction, the exhiliration of a high altitude just right for the comfort and rapid recovery of the healthseeker, and the fact that in 1907, the maximum wind velocity recorded was only 38 miles an hour, and it must be acknowledged by the student of comparative meteorology that Santa Fe has the climate par excellence for the making of an all-around-the-year health resort, to which are added attractions and advantages of which any widely advertised tourist resort would be proud. For

Irrigation in the Rio Grande Valley, New Mexico.

the accommodation of healthseekers, Santa Fe besides its five hotels, has Saint Vincent's Sanitarium, Sunmount Tent City, the Diaz Sanitarium, and one or two other tent sanitaria in addition to private boarding and rooming houses.

However, history, scenery and climate are but incidentals in the every day life of Santa Fe. It is the capital of the Territory and has been the most important city of the Southwest for three hundred years. It commands commercially with its three railways and many wagon roads a trade area equaling a good sized kingdom. It is the county seat; also the see of an archbishop of the Roman Catholic church. Besides its Woman's Board of Trade it has a general Board of Trade and a Commercial Club; a beautiful Capitol, a Federal Building classic in its outline and substantial in its construction, a court house medieval in architecture, a Cathedral, Roman Catholic, Presbyterian, Protestant Episcopal and Methodist churches, the Mary James and the Allison Mission Schools of the Presbyterian church, one for boys and the other for girls; Saint Michael's College, the oldest college for boys west of the Missouri; Loretto Academy and Convent, the oldest young ladies' Seminary west of the Missouri; a splendid system of schools of which the high school building is the finest public school structure in New Mexico. There are besides, the territorial penitentiary, the territorial deaf and dumb school, Saint Vincent's orphan's home, Saint Vincent's hospital, the Diaz hospital and Sanatorium. The United States Indian Industrial School has more than 300 pupils and Saint Catherine's Indian School is maintained by the Catholic Church along similar lines. Santa Fe has the only National Cemetery in New Mexico or Arizona.

At the Federal land office, a drama is being quietly transacted at this very time which is more momentous in its consequences than the brilliant deeds of the Conquistadores. Here an average of thirty homestead land entries are being made daily, steadily reducing the area of 10,000,000 acres of public lands over which this office has control and filling up the fertile Estancia and other valleys tributary to Santa Fe. There are hundreds of thousands of acres immediately around Santa Fe still open to public land entry. as good land as is to be found anywhere. Santa Fe is also the headquarters of the Internal Revenue District for New Mexico and Arizona, of the Surveyor General, the Pueblo Indian Attorney, the Supervisor of the Pecos, Jemez and Taos Forest Reserves, the Federal Weather Bureau, the U. S. District Court, and of other Federal official activities for the Territory. The

R. H. Woods Ranch Near Farmington
An Apple Orchard
Alfalfa Field - La Plata
Farmington - Looking Across the Valley

municipality owns all of the vacant lands of the Santa Fe Land Grant of thirty square miles.

Nor is the story of Santa Fe complete without speaking of its orchards, its gardens, its hospitable homes. The fruit raised here rivals that of California in size and color and surpasses it in flavor. Nearby valleys, irrigated from mountain streams, are unexcelled in fertility. In every direction lead roads to scenes of impressive beauty or historic or archaeological interest. Peaks 13,000 feet high can be climbed easily over well worn trails, and snowfields found in mid-summer. In every direction are forests and rivers and lakelets; mines a hundred years old or only discovered yesterday, from the Tiffany turquoise mines, fourteen miles to the south, and the ancient gold placers of the Ortiz Mountains, to the copper, mica and gold mines twenty to fifty miles north. Coal underlies the surrounding hills and clay of the best quality furnishes the material for brick so superior that they are exported four to five hundred miles into Mexico. In the jewelry shops the daintiest gold and silver filigree work is made, or rather spun, while in the surrounding pueblos pottery of quaint design is manufactured. There is some weaving of blankets and of baskets in these villages and other native handicraft of interest to the visitor.

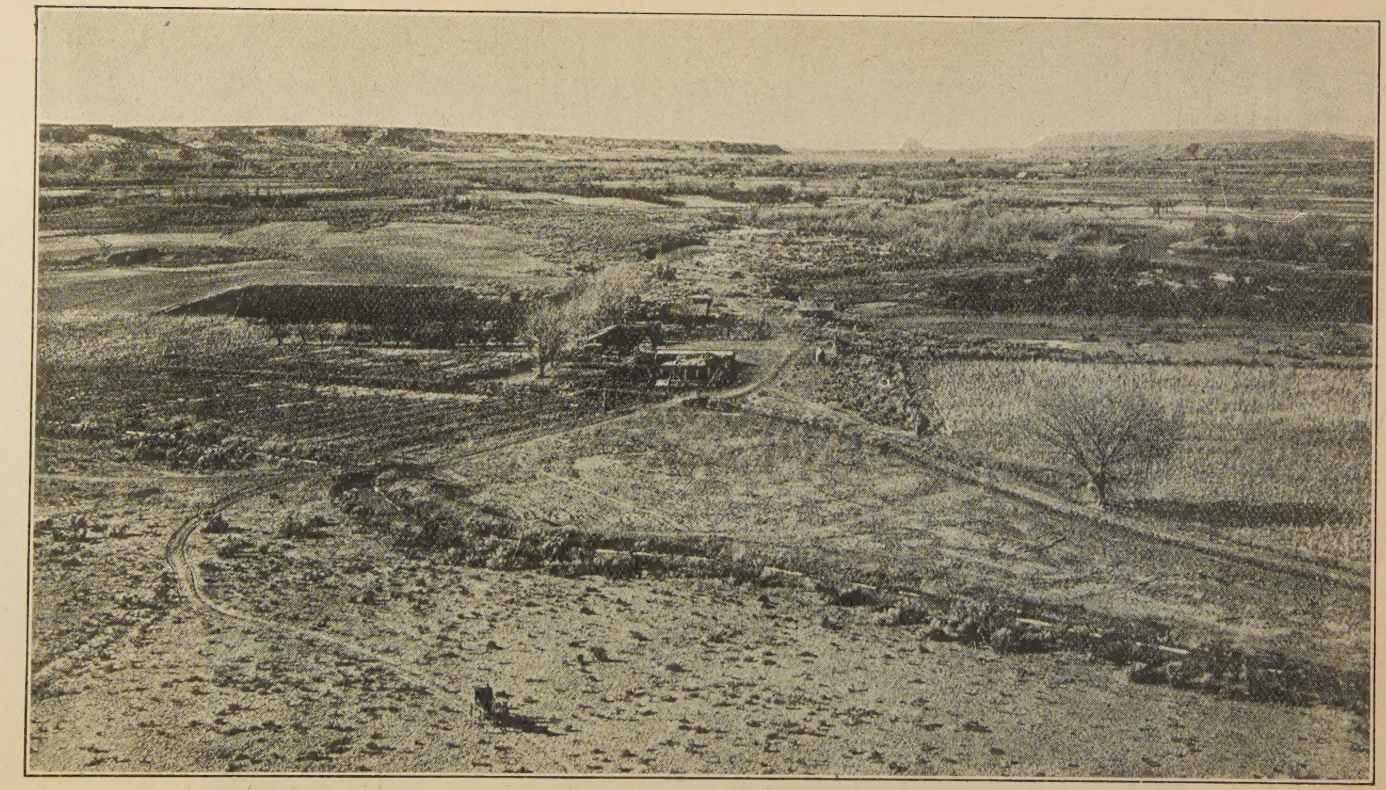
Santa Fe is proud of its public library just completed by its Woman's Board of Trade, a body unique in the annals of civic advancement. The building is of brick, built in Mission style and was constructed without contribution from the great library giver of the United States, something of which few public libraries of today can boast. The Woman's Board of Trade also looks after the Plaza and Fairview Cemetery, besides taking care of the indigent and doing other public spirited and civic work. Santa Fe has one daily paper, four weekly papers, two of them Spanish; two banks, telephone and telegraph connection with all the world, electric light plant and enterprising wholesale and retail establishments.

From all this it must be gathered that while Santa Fe is ancient, it is not sleepy; while it is a veritable Vale of Enchantment it is fully abreast of modern progress; that while it offers to the tourist the same things that attract thousands to distant climes and far away places it also has for him every modern comfort and accommodation and that at prices so moderate that they make a visit to Santa Fe an economy, for the side trip from Lamy to Santa Fe is free to holders of tourists' tickets on the Santa Fe system, and there are no toll houses on the roads nor ticket boxes at the entrances to the sights so well worth seeing. Three railroad

Alfalfa and Cattle, Pecos Valley, N. M.

systems form a junction at Santa Fe, the Atchison, Topeka and Santa Fe, the Denver and Rio Grande and the Santa Fe Central, the last named being a connecting link with the Rock Island and El Paso and Southwestern Systems. No tour of the West, no matter how brief or how long, is complete without seeing Santa Fe, and a visit to this historic City of the Holy Faith is a Southwestern tour in itself.

Oldest House in the United States.



The San Juan and Anumas Valleys L oking West Three Miles From Their Junction.

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